

ENGLISH TRANSLATION OF THE INTERNATIONAL APPLICATION

FOR NATIONAL PHASE SUBMISSION

Claims

1. Method for adapting a measured value (MW1) of an air mass sensor (14), in which
 - a correction value (KW1, KW2) is determined, if predefined operating conditions (BB1, BB2) obtain, depending on the measured value (MW1) and a comparison value (VW) which is determined depending on at least one further measured value (MW2) of a further sensor,
 - an adaptation value (AD1, AD2) is checked and adapted depending on the correction value (KW1, KW2), on the duration (D_AD1, D_AD2) since the last adaptation of the adaptation value (AD1, AD2) and the change in the adaptation value (AD1, AD2) since the last adaptation of the adaptation value (AD1, AD2) and
 - measured values (MW1) subsequently recorded are corrected with the adaptation value (AD1, AD2).
2. Method in accordance with one of the previous claims, in which, as the duration (D_AD1, D_AD2) since the last adaptation of the adaptation value (AD1, AD2) increases, the adaptation value (AD1, AD2) is adapted more heavily depending on the correction value (KW1, KW2).
3. Method in accordance with one of the previous claims, in which for a change in the adaptation value (AD1, AD2), which is characteristic for an unauthorized modification (UM) to the air mass sensor (14), the adaptation value (AD1, AD2) is assigned an initialization value (AD1_INI).
4. Method in accordance with claim 3,
in which a negative change of the adaptation value (AD1,

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AD2), of which the amount is greater than a predefinable first threshold value (SW1), and a duration (D_AD2, D_AD1) since the last determination of the correction value (KW1, KW2), which is less than a predefined second threshold value (SW2), are characteristic of the unauthorized modification (UM) to the air mass sensor (14).

5. Method in accordance with one of the previous claims, in which a positive change to the adaptation value (AD1, AD2), of which the amount is greater than a predefinable first threshold value (SW3), and a duration (D_AD1, D_AD2) since the last determination of the correction value (KW1, KW2), which is less than a predefined second threshold value (SW4), are characteristic of an extraordinary contamination of the air mass sensor (14), and in which an error reaction occurs on detection of an extraordinary contamination.
6. Method in accordance with claim 5, in which the error reaction is an indication of an error, which occurs so that the driver of a motor vehicle in which the air mass sensor (14) can be located recognizes that an error has occurred.
7. Method in accordance with one of the previous claims, in which at least a first correction value (KW1) and a second correction value (KW2) are determined, with the first correction value (KW1) being determined if predefined first operating conditions (BB1) obtain, and the second correction value (KW2) being determined if predefined second operating conditions (BB2) obtain, and in which, depending on the first correction value (KW1) a first adaptation value (AD1) is checked and adapted, and depending on the second

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correction value (KW2) a second adaptation value (AD2) is checked and adapted and measured values (MW1) of the air mass sensor (14) subsequently recorded are corrected with an adaptation value (AD) interpolated, depending on the current operating conditions (BB), between the at least first and second adaptation value (AD1, AD2).